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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/591,865

09/06/2006

Naoto Ikegawa

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EXAMINER

DOLLINGER, MICHAEL M

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/591,865	Applicant(s) IKEGAWA ET AL.	
	Examiner MICHAEL DOLLINGER	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-5, 7-9, 12 and 13 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 13 of copending Application No. 10/591,706. Although the conflicting claims are not identical, they are not patentably distinct from each other. It is clear that all the elements of the instant claims 1-5 and 7-9 are to be found in the copending claim 13 (as instant claims 1-5 and 7-9 fully encompasses copending claim 13). The difference between the instant claims 1-5 and 7-9 and the copending claim 13 lies in the fact that the copending claim 13 includes more elements and is thus more specific. Thus the invention of copending claim* is in effect a "species" of the "generic" invention of instant claims 1-5

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and 7-9. It has been held that the generic invention is "anticipated" by the "species".

See *In re Goodman*, 29 USPQ2d 2010 (Fed. Cir. 1993). Since instant claims 1-5 and 7-9 are anticipated by the copending claim 13, they are not patentably distinct from each other.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 5, 6, 8-11 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Furuta et al (US 5,891,532).

5. Furuta et al disclose molded films [abstract] of a liquid crystal polyester resin composition comprising (A) 56 through 99% by weight of a liquid crystal polyester [abstract] and (B) 44 through 1% by weight of a thermoplastic resin having an epoxy group [abstract]. The thermoplastic resin having an epoxy group (B) is preferably included in an amount of 2.0 to 30.0% by weight [column 10 lines 41-42] which corresponds to the claimed amount of 0.1 to 17% by weight (0.1 to 20 parts by weight with respect to 100 parts by weight of liquid-crystal polyester). The liquid crystal polyester (A) is preferably formed from 30 through 80% by mole of a repeating unit

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derived from p-hydroxybenzoic acid, 10 through 35% by mole of a repeating unit derived from an aromatic dicarboxylic acid, and 10 through 35% by mole of a repeating unit derived from an aromatic [column 7 line 63 through column 8 line 22]. Since Furuta et al disclose only 5 alternatives for hydroxycarboxylic acids and 2-hydroxy-6-naphthoic acid is one of them [column 6 lines 11-40], one having ordinary skill in the art would have readily envisaged a polymer with the above molar amounts of repeating units with 2-hydroxy-6-naphthoic acid in place of repeating units derived from p-hydroxybenzoic acid. The thermoplastic resin component (B) is preferably an epoxy group-containing ethylene copolymer comprising (a) 60 through 99% by weight of an ethylene unit and (b) 0.5 through 25% by weight of a glycidyl unsaturated carboxylate unit or an unsaturated glycidyl ether unit [column 8 lines 54-61]. Furuta et al disclose a method of molding a film wherein the molding temperature is between 60°C below and 60°C above the flow temperature of the liquid crystal resin composition [column 12 lines 11-14]. Since the polymer and processing temperatures disclosed in Futura et al are the same as those claimed, it is held that the claimed change in dielectric loss tangent is inherent.

6. Regarding claims 10 and 11, the claims recite limitations on the process of preparing the liquid crystal polyester and the monomers contained therein. However, what is actually claimed is a method for preparing a resin molded article of liquid crystalline polyester with a lowered dielectric loss tangent. Henceforth any limitations on the preparation of the polymer are product-by-process limitations and irrelevant to patentability in the absence of unexpected results in the form of a structural difference in

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the resulting composition. Since Furuta et al disclose anticipatory liquid crystal polyesters, discussed above, all the limitations of claims 10 and 11 are met.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 7 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Furuta et al (US 5,891,532 hereinafter referred to as '532) in view of Furuta et al (US 5,759,674 hereinafter referred to as '674).

10. '532 does not specifically disclose the molded resin films having a metal film formed in a circuit pattern.

11. '674 discloses nearly identical polymer compositions to those in '532. Including the amount of liquid crystal polyester and ethylene copolymer [abstract], the repeating units of the liquid crystal polyester [column 6 lines 19-43; column 4 lines 11-40], and the

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repeating units of the ethylene copolymer [column 6 lines 56-65]. '674 also teach that the liquid crystal polyester films may be laminated with a metallic foil to produce printed-wiring boards [abstract].

12. It is *prima facie* obvious to select a known material based on its art recognized suitability for an intended use. See *Sinclair & Carrol Co. V. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have made a resin molded article of a liquid crystal polyester and an epoxy-group containing ethylene copolymer with a metal film formed in a circuit pattern and heat treated below the flow-beginning temperature because '532 teach a heat treated liquid crystal polyester resin composition film and '674 teach the same composition with a metallic foil laminate for printed wiring boards. Absent any evidence to the contrary, there would have been a reasonable expectation of success of depositing a circuit patterned metal film on the resin composition film of '532.

Response to Arguments

13. Applicant's arguments filed 9 January 2009 with respect to the rejection over Furuta et al (US 5,891,532 hereinafter referred to as '532) have been fully considered but they are not persuasive. Applicants argue that the claimed invention is different than the invention of '532 because a) the claimed invention is directed toward a molded article while '532 is directed toward a gas barrier thin film capable of being blow molded and b) the instant claims recite an ethylene copolymer in a range of 0.1 to 20 parts by

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weight and this range is not disclosed in '532. These arguments are not convincing because:

a. A blow molded gas barrier thin film *is* a molded article. This is a genus-species situation wherein the blow molded gas barrier thin film is a species of the genus molded article. It has been held that the generic invention is anticipated by the species. See *In re Goodman*, 29 USPQ2d 2010 (Fed. Cir. 1993).

Furthermore, '532 states that the composition can be molded by various kinds of film-molding processes [column 11 lines 13-14].

b. The claimed range of 0.1 to 20 parts by weight of ethylene copolymer per 100 parts by weight of liquid-crystalline polyester corresponds to a range of 0.1 to 17% by weight of ethylene copolymer based on the total weight of ethylene copolymer and liquid-crystalline polyester. '532 disclose a preferred amount of ethylene copolymer as 2.0 to 30.0% by weight.

14. Applicant's arguments filed 9 January 2009 with respect to the rejection over Furuta et al (US 5,891,532 hereinafter referred to as '532) in view of Furuta et al (US 5,759,674 hereinafter referred to as '674) have been fully considered but they are not persuasive. Applicants argue that '532 and '674 only disclose a film as opposed to a molded resin article. Applicants argue that the film is thin with a thickness within a range of 2 to 500µm and preferably within a range of 5 to 300µm. This argument is not convincing because in '532 and '674 disclose *molded films*; '532 notes that the composition can be molded by various kinds of film-molding processes [column 11 lines

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13-14] and '674 discloses that oriented films may be molded in an extruder [column 9 lines 6-8]. The present claims do not recite any limitations to the size of the claimed resin molded article, so the thicknesses of the molded films of '532 and '674 are irrelevant to patentability.

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL DOLLINGER whose telephone number is

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(571)270-5464. The examiner can normally be reached on Monday - Thursday
7:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Randy Gulakowski/
Supervisory Patent Examiner, Art Unit 1796

MICHAEL DOLLINGER
Examiner
Art Unit 1796

/mmd/